

From the

## INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing  
 (day/month/year)

27 FEB 2003

Applicant's or agent's file reference

REPLY DUE

within 2 months/days from  
 the above date of mailing

010080WO

International application No.

International filing date (day/month/year)

Priority date (day/month/year)

PCT/US02/16530

23 May 2002 (23.05.2002)

24 May 2001 (24.05.2001)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): H04B 1/38; H04Q 7/20 and US Cl.: 455/574, 187.1, 556

Applicant

QUALCOMM INCORPORATED

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
 For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
 For an informal communication with the examiner, see Rule 66.6

**If no reply is filed,** the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 24 September 2003 (24.09.2003)

Name and mailing address of the IPEA/US  
 Commissioner of Patents and Trademarks  
 Box PCT  
 Washington, D.C. 20231  
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Authorized officer

Tracy M. Legree

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Form PCT/IPEA/408 (cover sheet)(July 1998)

## 1. Basis of the opinion

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages 1-13 \_\_\_\_\_, as originally filed  
pages NONE \_\_\_\_\_, filed with the demand  
pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages 14-16 \_\_\_\_\_, as originally filed  
pages NONE \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages NONE \_\_\_\_\_, filed with the demand  
pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
pages 1-4 \_\_\_\_\_, as originally filed  
pages NONE \_\_\_\_\_, filed with the demand  
pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages NONE \_\_\_\_\_, as originally filed  
pages NONE \_\_\_\_\_, filed with the demand  
pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE \_\_\_\_\_
- ☐ the claims, Nos. NONE \_\_\_\_\_
- ☐ the drawings, sheets/fig NONE \_\_\_\_\_

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

WRITTEN OPINION

International application No.  
PCT/US92/16530

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. STATEMENT

Novelty (N)	Claims <u>1-21</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-21</u>	NO
Industrial Applicability (IA)	Claims <u>1-21</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. Citations and Explanations:**

Claims 1-21 lack an inventive step under PCT Article 33(3) as being obvious over Shimanuki, U.S. Patent No. 5,890,071 in view of Applicant's Admitted Prior Art (AAPR).

Regarding **claim 1**, Shimanuki discloses a device adapted to communicate with an audio mux, the audio mux receiving a vocoder input from a vocoder and an audio decoder input from an audio decoder, the device comprising:  
a stereo/mono control unit (11) coupled to a codec (104, 6A, 6B); (Figure 1, 4-7 column 3, lines 31-40)  
the stereo/mono control unit receiving an input from the tuner (15), the stereo/mono control unit providing a control output to the codec to reduce power consumption in the codec. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Shimanuki fails to specifically disclose the receiver path comprising an audio mux. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9).

Regarding **claim 2**, Shimanuki in view of AAPR further discloses the device of claim 1 wherein the control output is coupled to a plurality of components in a receive audio processing path of the codec. (Shimanuki: Figures 1 and 4-7)

Regarding **claims 3 and 4**, Shimanuki in view of AAPR discloses the device of claim 2 but fails to disclose the device wherein the plurality of components are in a right or left channel of the receive audio processing path.

The AAPR discloses that the plurality of components may be in either a right or left channel of the receive audio processing path. (Figure 1; page 3, lines 4-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki such that the receive audio processing path included both a right channel and left channel for the purpose of allowing the audio signals to be output through either a loudspeaker (19) or a loudspeaker (9).

Regarding **claim 5**, Shimanuki in view of AAPR further discloses the device of claim 2 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 6**, Shimanuki in view of AAPR further discloses the device of claim 2 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claim 7**, Shimanuki in view of AAPR further discloses the device of claim 6 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 8**, Shimanuki in view of AAPR further discloses the device of claim 1 wherein the control output disables

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

at least one of a plurality of components in a receive audio processing path of the codec when the audio mux input received by the stereo/mono control unit comprises voice signals. (Shimanuki: Figure 1, 4-7; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 9**, Shimanuki in view of AAPR further discloses the device of claim 8 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claims 10 and 11**, Shimanuki in view of AAPR further discloses the device of claim 1 wherein the stereo/mono control unit further inherently receives plug-in detection input from a plug-in detection circuit that receives an I/O input from an I/O jack as evidenced by the fact that when it detected that the plug of headset (24) is inserted into the headset jack, other processes are performed. (Shimanuki: column 7, line 57-column 8, line 12)

Regarding **claims 12, 16 and 17**, Shimanuki discloses a method for processing received audio signals in a device, the method comprising disabling a tuner circuitry when the audio signals comprise voice signals; and enabling the telephone circuitry when the audio signals comprise music signals. Shimanuki further discloses the concept of providing power to both the tuner and telephone circuitry when the tuner is selected and providing power to only the telephone circuitry when the tuner is not selected for the purpose of conserving power. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Shimanuki fails to disclose that the receive audio path comprising a first channel and a second channel.

The AAPR discloses that the plurality of components may be in either a right or left channel of the receive audio processing path. (Figure 1; page 3, lines 4-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki such that the receive audio processing path included both a right channel and left channel for the purpose of allowing the audio signals to be output through either a loudspeaker (19) or a loudspeaker (9).

Regarding **claim 13**, Shimanuki in view of AAPR discloses the method of claim 12 wherein the disabling of the first channel is performed by a stereo/mono control unit. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 14**, Shimanuki in view of AAPR discloses the method of claim 13 wherein the disabling of the first channel is performed by the control output of the stereo/mono control unit disabling at least one of a plurality of components in the first channel. (Shimanuki: Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 15**, Shimanuki in view of AAPR discloses the method of claim 14 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp. (Shimanuki: Figure 6; column 7, lines 55-60; AAPR: Figure 1)

Regarding **claim 18**, Shimanuki in view of AAPR discloses the method of claim 13 wherein the device comprises a vocoder and an audio decoder. (Shimanuki: Figures 1 and 4-7) Shimanuki fails to specifically disclose the receiver path comprising an audio mux that receives voice signals from the vocoder and music signals from the audio decoder. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9) depending on whether the signals are voice or music.

Regarding **claim 19**, Shimanuki in view of AAPR discloses the method of claim 18. Shimanuki fails to specifically disclose the receiver path comprising an audio mux. AAPR discloses a receiving path having an audio mux. (Figure 1; page 3; lines 12-13) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimanuki to include an audio mux for the purpose of directing the audio signals to be output to either through either the loudspeaker (19) or the loudspeaker (9).

Regarding **claim 20**, Shimanuki in view of AAPR discloses the method of claim 12 further comprising determining whether a stereo output component is coupled to the device. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

Regarding **claim 21**, Shimanuki in view of AAPR discloses the method of claim 20 further comprising disabling the first channel when the stereo output component is not coupled to the device. (Figure 1, 4-8; column 3, lines 61-66; column 4, lines 36-67; column 5, lines 1-32)

## ----- NEW CITATIONS -----

US 5,890,071 A (SHIMANUKI) 30 March 1999 (30.03.1999), see Figures 1 and 4-8. column 3, lines 30-39; column 3, lines 61-67; column 4, lines 36-67; column 5, lines 1-33; column 6, line 60.